

## EQUIVALENCE IN THE TRANSLATION OF FIRE TERMS FROM ENGLISH INTO VIETNAMESE

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**Abstract:** This paper aims to assess the equivalence in fire term translation from English into Vietnamese. Data included 3168 fire terms in English selected from dictionaries of fire terms, English for Fire and Rescue course book, as well as scientific and technical documents. Comparison method was used to evaluate how English fire terms were translated into Vietnamese. Through actual analysis, recommendations for a number of approaches for English - Vietnamese fire term translation shall be made.

**Keywords:** translation, translation equivalence, fire terms, translating methods

### Introduction

Along with the development of fire service in Vietnam in recent years, the necessity of fire term translation from English into Vietnamese to serve the development of Vietnam standards on fire protection has become increasingly urgent especially when Vietnam has collaborated with countries with developed fire protection system in terms of research, study and exchanges. However, in reality, many English fire terms translated into Vietnamese are still inconsistent, lengthy, descriptive, and sometimes subject to the personal opinion of experts and translators. In this paper, we investigated the equivalence of fire term translation from English into Vietnamese, accordingly, recommendations were made to develop a standard Vietnamese fire term system, meeting the development needs of the fire service on the way of international integration.

### 1. Definitions of Translation and Translation Equivalence

#### 1.1. Definitions of translation

Researchers have come up with different perspectives on translation. Cartford [1, p.20] stated that: "Translation is the replacement of text material of this language (source language) with text material of another (target language)". According to Hartman and Stock [4], "Translation is the replacement of a representation of a text in one language by a representation of an equivalent text in a second language".

Nida and Taber [14, p.45] introduced the concept, "Translating consists in reproducing in the receptor language that closest natural equivalent to the message of the source language, first in meaning and secondly in style". Larson [7, p184] said that, "Translation is essentially studying vocabulary, grammar, communication situations, cultural style of the text in the source language, analyzing to find out the meaning, and then restoring such structure in the target language with the same vocabulary structure, grammar, communication situations, cultural style of the target language". However, Newmark [10, p.124] assumed that: "Translation is rendering a written text into another language in a way that the author intended the text"

The above-mentioned definitions revealed that the essence of translation is a process of converting meaning from the source language to the target language in terms of original content preservation. This process is a creative, linguistic communication that involves creation and acquisition processes for unity between content and form in the source and target languages.

#### 1.2. Translation Equivalence

After centuries of controversy surrounding Literal translation or Adaptation, in the 60s of the twentieth century, researchers such as Roman Jakobson, Eugene Nida, Peter Newmark and Werner Koller attempted to conduct more systematic analysis of translation and, most notably, to focus on equivalence in translation.

In the research articles "On linguistic aspects of translation", Jakobson delved into linguistic meaning and meaning equivalence between words of different languages. He pointed out that, a complete equivalence between language pairs does not normally exist. According to Jakobson's argument, translation can be seen as the process of replacing messages in one language not with individual coding units but with all of those messages in another language. Thus, translation involves two equivalent messages in two different codes. Jakobson came up with a well-known and widely accepted definition: Equivalence

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in difference is the cardinal problem of language and the pivotal concern of linguistics. Hence, to understand the correlation of meaning and equivalence, translators must focus on the structural and terminological differences of the languages.

To further the discussion on equivalence in translation, Newmark stated that *"Equivalence is not about equality, balance in meaning but translation process and translation rules"*[10, p.35]. Catford [1, p.21] added *"The central problem of translation is to find equivalence in the target language, so the main task of translation theory is to define the nature and the conditions for translation equivalence"* With translation equivalence approach, Nida [13, p.135] offered two main approaches, including formal and dynamic equivalence. Newmark [11, p.131] reconstructed two of Nida's approaches with a new name of meaning-based equivalence and communication-based equivalence. Meanwhile, Meetham and Hudson [9] offered two other approaches, including full and partial equivalence.

Thus, the translation equivalence is the process of translating and replacing source-language text with target language text. The equivalence not merely is an equivalence product in the target language reproduced from the source language, but also is a process of reproducing the equivalence in many aspects such as: meaning, form, and function. Although perspectives on translation equivalence are very diverse and controversial, it is necessary to find equivalence in translation because this is the essence of translation theory. Therefore, the central requirement of the translation process is equivalence.

### 1.3. Translation equivalence types

There are many different types of translation equivalence. Le Hung Tien [8] gave the following four equivalence classifications: 1) Form-based Equivalence; 2) Meaning-based Equivalence; 3) Function-based Equivalence; 4) Quantity-based Equivalence. Moreover, he proposed the following basic equivalence types: One to one equivalence, One to many equivalence, One to part of one equivalence, Nil-equivalence.

When discussing translation equivalence in terminology, it is impossible not to mention the term equivalence types proposed by Felber, H. in Terminology Manual [1984] in Paris. Unlike other authors when studying terminology equivalence, Felber H. divided term equivalence into four main categories: complete equivalence, crossing equivalence, containing equivalence and nil equivalence. According to his arguments, in the field of specialized linguistics, the basis for comparison of languages is much more favorable because the research focus of specialized language is research of the defined or partially defined terms, expressive words only play a secondary role, the important is conceptual content. Two terms are considered to be equivalent if they are equivalence in all conceptual features.

Ha Quang Nang also pointed out different equivalence degrees in terminology, including: equivalence 1 // 1; equivalence 1 //> 1; equivalence > 1 // 1; equivalence > 1 //> 1.

In this paper, the author chose Ha Quang Nang's model as the theoretical framework to investigate how to translate the fire term from English into Vietnamese.

### 1.4. Equivalence guarantee criteria

Nida, E. argued that translation success largely depends on the expression of equivalence reactions and that in order to achieve the above requirement, the translator needs to adhere to the following basic criteria: 1. Focus on meaning; 2. Communicate the spirit and manner of the source text; 3. Have easy and natural forms of expression; 4. Cause a similar response "[13, p. 164].

Meanwhile, the English Linguistics Institute states that the standard translation should have the basic criteria: 1. Accuracy 2. suitable choice of vocabulary, idioms, terminology and styles; 3. Coherence, consistency; 4. Accuracy in technical terms such as punctuation.

Based on the above points of view, in this study, we gave the criteria in translating the equivalence of the fire term from English into Vietnamese, that is: 1. Accuracy; 2. Systematization, consistency and coherence; 3. Appropriate choice of equivalence terminology.

### 1.5. Translation Equivalence in terminology

Terminology, which is a special lexical component in each language, expresses common scientific concepts in different languages. Consequently, internationality is an important feature of the term. According to Nguyen Thien Giap, "Equivalence terms in languages are the realization of a common concept found in languages" [12, p.584].

Term translation is a faithful way of expressing the semantic content of a term from a foreign language into Vietnamese using the available lexical elements in Vietnamese. This translation requires finding the most similarity between the source language and the target language, which must be accurate, be faithful and convey exactly the content in the source language.

In term translation, the most important issue is to ensure the accuracy of scientific concepts expressed in different language units in the source and target languages. Since the source language has characteristics different from the target language and the term translation is mainly about finding the equivalence at the lexical level, it is necessary to pay attention to the type characteristics of the structure, designation, grammar, rhetorical characteristics of the source language, especially the exceptions.

Upon translating a term, the source language and the target language can be of the same type or different type, meaning equivalence can have different degrees: meaning-based complete equivalence, meaning-based partial equivalence and nil equivalence. Therefore, it is necessary to adopt different treatment methods under their equivalence level.

For terms with partial equivalence, it is possible to use the partial corresponding language units in the target language in combination to retain partial form in the source language. For nil equivalence terms, appropriate loan translation method must be used.

## 2. Survey on translation of English fire term into Vietnamese

### 2.1. Equivalence analysis of Fire term translation by term structure unit

Through surveying data on 3168 fire terms taken from the following sources: English for Fire and Rescue, English terms in Fire Prevention and Fighting and Rescue, Russian-English-Vietnamese emergency incident dictionary, we see that there are two main types of equivalence between English and Vietnamese fire terms, which are 1 // 1 and 1 //> 1 equivalence.

#### 2.1.1. Equivalence 1 // 1

No	Equivalence	Example	Number of terms	Percentage (%)
1.	<b>Word-word:</b> an English fire term with an equivalent Vietnamese fire term as one word.	<i>Combustion - sự cháy</i> <i>Foam - bọt</i>	5922	18.7
2.	<b>Word- phrase:</b> an English fire term with an equivalent Vietnamese fire term as one phrase.	<i>Arson - tội cố ý gây cháy</i> <i>Backdraft - hiện tượng bùng cháy</i>	243	7.7
3.	<b>Phrase - word:</b> an English fire term is a phrase with an equivalent Vietnamese fire term as one word.	<i>pike pole - câu liêm</i> <i>sprinkler head - đầu phun</i>	184	5.8
4.	<b>Phrase - phrase:</b> an English fire term is a phrase with an equivalent Vietnamese fire term as one phrase.	<i>False alarm - báo cháy giả</i> <i>Deluge system - hệ thống phun tràn</i>	1053	33.2

#### 2.1.2. Equivalence 1 //> 1

No	Equivalence	Example	Number of terms	Percentage (%)
5.	<b>Word-word:</b> an English fire term is a phrase with more than one equivalent Vietnamese fire term as word.	<i>Fire</i> – 1. Lửa 2. Đám cháy. 3. hoả hoạn <i>Flammable</i> – 1. Bền lửa 2. Dễ cháy	426	13.4
6.	<b>Word- phrase:</b> an English fire term is a word with more than one equivalent Vietnamese fire term as phrase.	<i>Accelerant</i> – 1. Chất môi cháy 2. Chất xúc tác <i>Flashpoint:</i> 1. Điểm chớp cháy 2. Điểm bốc cháy	194	6.1
7.	<b>Phrase - word:</b> an English fire term is a phrase with more than one equivalent Vietnamese fire term as words.	<i>Initiating zone</i> 1. Kênh khởi đầu 2. Kênh kích hoạt <i>Private dwelling</i> – 1. Nhà riêng 2. Nhà dân	35	1.1
8.	<b>Phrase - phrase:</b> an English fire term is a phrase with more than one equivalent Vietnamese fire term as phrases.	<i>Flammable liquid-</i> 1. Chất lỏng dễ cháy <i>Fire spread</i> – 1. Sự lan truyền của đám cháy 2. Cháy lan	441	13.9

**Table 1: Equivalence types of fire terms in English and Vietnamese according to the type of term structure unit**

No	Equivalence type	Number of terms	Rate (%)
1	Word // word equivalence	592	18.7
2	Word // phrase equivalence	243	7.7
3	Phrase // word equivalence	184	5.8
4	Phrase // phrase equivalence	1053	33.2
5	Word // > word equivalence	426	13.4
6	Word // > phrase equivalence	194	6.1
7	Phrase // > word equivalence	35	1.1
8	Phrase // > phrase equivalence	441	13.9

According to the type of term structure, from the survey results, we can see that two types of equivalence, including phrase // phrase, word // word accounting for the highest proportion (33.2% and 18.7% respectively). Similarly, the equivalence of word//> word and phrase //> phrase is common found in the equivalence of translating English-Vietnamese terms (accounting for 13.4% and 13.9%, respectively).

From the results of the analysis of linguistic sources about the equivalence types of terminology translation according to the type of term structure unit, it can be seen that there are two main equivalence types used in the fire term translation, including equivalence 1 // 1 and equivalence 1 //> 1, in which there are the word - word equivalence; word-phrase equivalence; phrase-word equivalence and phrase-phrase equivalence.

The above analysis shows the fact that translation equivalence types still pose many controversial problems in equivalence translation practice. Therefore, to discuss the equivalence translation of fire terms from English into Vietnamese, it is necessary to clearly define the equivalence unit rates of this term system.

## 2.2. Equivalence analysis on translating fire terms according to the number of units

The survey data show 6 equivalence levels in translating fire terms from English into Vietnamese; i.e. an English fire term sometimes is translated into one or more Vietnamese fire terms, up to 6 units. Details are as follows:

No	Equivalence	Example	Number of terms	Percentage
1	<b>1:1:</b> One English fire term has one equivalent Vietnamese fire term	<i>Backburn- đốt chặn</i> <i>Deflector- tán phun</i>	1539	48.6
2	<b>1:2:</b> One English fire term has two equivalent Vietnamese fire terms	<i>Stabilizder – 1. Chân thang 2. Chất ổn định</i> <i>Moniort – 1. Lãng giá 2. Sự giám sát</i>	1305	41.2
3	<b>1:3:</b> One English fire term has three equivalent Vietnamese fire terms	<i>Blanket – 1.làm ngạt 2. Cách ly 3. Phủ lên</i> <i>Burn – 1. Cháy 2. Đốt 3. Bỏng</i>	191	6.0
4	<b>1:4:</b> One English fire term has four equivalent Vietnamese fire terms	<i>Detector: 1. Đầu báo 2. Máy dò 3. Bộ cảm biến 4. Máy phát hiện</i> <i>Inert: 1. Không tham gia phản ứng cháy 2. Trơ 3. Không nhạy 4. Mất hoạt tính</i>	82	2.6
5	<b>1:5:</b> One English fire term has five equivalent Vietnamese fire terms	<i>Nozzle: 1. Lãng chữa cháy 2. Vòi phun 3. ống phun 4. Miệng phun 5. Lãng phun</i> <i>Gas: 1. Khí 2. Hơi đốt 3. Hơi độc 4. Hơi ngạt 5. Dầu xăng</i>	36	1.1
6	<b>1:6:</b> One English fire term has six equivalent Vietnamese fire terms	<i>Ignite: 1. Bắt lửa 2. Bốc cháy 3. Đốt cháy 4. Làm nóng chảy 5. Đánh lửa 6. Bùng</i> <i>Heat: 1. Nhiệt 2. Hơi nóng 3. Sức nóng 4. Nóng 5. Sự nóng bức 6. Sự nung</i>	15	0.5

**Table 2: Equivalence types of English and Vietnamese fire terms by number of units**

No	Equivalence ratio	Number of English fire terms with equivalence	Rate (%)
1	English 1: 1 Vietnamese	1539	48.6
2	English 1: 2 Vietnamese	1305	41.2
3	English 1: 3 Vietnamese	191	6.0
4	English 1: 4 Vietnamese	82	2.6
5	English 1: 5 Vietnamese	36	1.1
6	English 1: 6 Vietnamese	15	0.5
<b>TOTAL</b>		<b>3168</b>	<b>100</b>

The above statistics table indicates that fire terms in English and Vietnamese have the same equivalence rates according to the number of term units from 1: 1 to 1:6. The most common equivalence ratios, however, are 1: 1 and 1: 2 (total 2844 terms, accounting for 89.8%).

Besides, in terms of the number of equivalence units, it can be seen that the 1: 1 equivalence ratio accounts for the highest percentage (48.6%). Next, the ratio 1: 2 ranked second (41.2%); and the remaining 10.2% is the equivalence of 1: 3 to 1: 6.

In terms of form and structure: Equivalence ratios from 1: 1 to 1: 6 decrease in reciprocal terms, the higher the equivalence ratio, the lower the number of equivalence terms.

In terms of the number of term units: The 1: 1 equivalence ratio is approximately the same with the equivalence 1 > 1 (48.6% and 51.4% respectively). This proves the high occurrences of one-meaning of the English fire term when translating into Vietnamese.

In addition, from the perspective of equivalence units, the equivalence ratio of 1: 5 and 1: 6 accounts for an insignificant amount percentage of the total number of terms surveyed (there are 51 units, accounting for 1.6%).

It also can be seen that an English fire term has a relatively large percentage of units compared to a Vietnamese term (up to 6 units). This is because an English fire term has a wide range of units, but a Vietnamese fire term needs to use many different terms to fill such wide aspect.

### 3. Solutions for fire term translation from English into Vietnamese

Based on the results of translating situation of fire terms from English into Vietnamese as mentioned above, on the basis of translation theory and terminology, we propose the following solutions:

#### 3.1. Ensure translation equivalence criteria

The fire term is normally associated with the fire concept system, which has caused many difficulties in the process of finding equivalence translation. Therefore, fire term equivalence translation requires two important factors: language knowledge and fire knowledge, so as to perform the equivalence translation correctly. The general knowledge of the subject will help the translator understand and translate the terms accurately. Translators should always ensure translation equivalence criteria, based on translation equivalence criteria such as accuracy, systematization, consistency and coherence, as well as selection requirements on the appropriate equivalence term.

### 3.2. Solution for fire term translation from English into Vietnamese

Within the scope of the paper, we offer solutions for term translation applying translation equivalence and translation method.

#### 3.2.1. According to translation equivalence

##### Term translation with equivalence 1: 1

If the term equivalence is confirmed, then the best way is to translate the term, or translate its meaning or express it with Vietnamese words and phrases with equivalent content. Of course, it should be noted that the word order of English and Vietnamese have many contradictions, and the last word in English terminology is the main element, the central element of the term and then the dependent elements ranked in order of priority, the elements closest to the main element.

E.g: Hydraulic piston rod : Cần piston thủy lực

Heat sensitive element: Bộ phận cảm ứng nhiệt

##### Term translation with equivalence 1:>1

For this type of *equivalence*, from an original term, there are 2, 3, 4... variations in Vietnamese.

E.g: English term “nozzle” is translated into Vietnamese with 5 equivalence terms: 1. Lăng chữa cháy 2. Vòi phun 3. ống phun 4. Miệng phun 5. Lăng phun

The term “detector” has the following variations when being translated into Vietnamese: 1. Đầu báo 2. Máy dò 3. Bộ cảm biến 4. Máy phát hiện

The term translated into such variations will indeed cause difficulties for users, especially those without expertise. We propose to base on the semantic content of the original term to unify the selection and put in the dictionary the most appropriate option. If have to use two or three different options, there should be specific explanation and examples attached.

##### Term translation with equivalence >1:>1 and >1:1

These are instances of English origin terms with synonyms, leading to terms with synonyms in the target language. These cases more or less make it difficult for users, but the translator himself has difficulty finding and translating them reasonably and accurately, not causing confusion. If it does not affect the content of the term, a uniform form should be chosen.

E.g: In English, three terms: *stabilizer*, *jack* and *outrigger* mean *chân thang*, *chân thăng bằng*, *chân tó* of an aerial ladder truck. In this case, it should be uniformly translated as *chân thang*.

Similarly, three terms *monitor*, *deck gun*, *cannon* mean *lăng giá*, *vòi phun nước*. In this case, it should be uniformly translated as *lăng giá*.

#### 3.2.2. According to translation methods

##### Literal translation

Literal translation refers to common translation techniques with equivalence terms both in terms of form and content in the source language and target language. However, literal translation theorists argue that it is impossible to achieve a complete equivalence in translation and it is accepted terms in the text are handled so that such terms in the target language match the meaning of the source language terminology and achieve the intended purpose of the reader in the target language.

Therefore, literal translation will be particularly suitable for highly specialized fire terms when these fire protection terms have combinations of meaning units equivalent to the combination of elements, and have word order quite close to Vietnamese syntactic order.

### *Adaptation*

The translation of technical terms in accordance with the professional concept is an important requirement for the fire service. However, literal translation is not always appropriate because it can create ambiguous, obscure, even meaningless units, and thus misleading the users. When it is not possible to rely on the meaning of the term elements for translation, the translator should create a new term using Vietnamese identification method.

In this case, to translate these English fire terms, it is only possible to rely on meaning units and look for the equivalence Vietnamese term. In addition, for not borrowing words in the source language, this adaptation translation method will also be applied.

E.g.: water hammer: hiện tượng nước va, hiện tượng giật vòi

accountability officer : chiến sỹ trinh sát đám cháy

### *Loan translation*

Many English fire terms have been borrowed, kept original and become an indispensable part of the Vietnamese fire terminology. One of the reasons that translators should keep the same form in loan is because there are no corresponding units in the Vietnamese terminology system, for example the terms sprinkler, drencher, karabiner ... These terms are kept original when translated into Vietnamese.

Furthermore, when being translated into Vietnamese, a number of terms may not convey fully the content of concepts, objects and original meanings of the original term. In addition, there is a corresponding but not found systematic in expression and understanding. Some terms are understood and used popularly among scientists, experts and staff around the world when conducting research and activities in the field of fire protection, so keeping the same form also contributes to confidentiality of the exact calculation of the meaning and internationalization of the term.

Considering the unique characteristics of each translation method, when translating fire term from English into Vietnamese, we recommend using the appropriate translation methods for each term, term group, in for each specific situation, to ensure the basic characteristics and standards of the term, especially to accurately express the concept and semantic nuances of the term.

## **4. Conclusions**

The paper presented various definitions of translation, equivalence translation and some content related to translation equivalence; equivalence assessment to translate the fire term from English to Vietnamese and then proposed translation methods for fire term from English into Vietnamese.

The author found that in order to find the most suitable translation solution, first of all, the translator must analyze the grammar structure as well as the semantic relationship between the elements of the structure. The purpose of translation is to maintaining the most natural and accurate meaning of words and terms in the source language into the target language. Regardless of the form of translation used, it is necessary to ensure the basic principles of terminology and the criteria of the term in general, thereby helping the translator to have a systematic and comprehensive view of the terminology and translation, contributing to overcoming the shortcomings of the fire term translation from English to Vietnamese.

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